

the survey of the meteorological literature of other countries, which forms a large part of our collection.

There is the whole field of the history of meteorology. How little we have done to form a connected story of the study of weather as disclosed by the writings which have come down to us. Men in all ages have been face to face with the problem of the weather. How little do any of us know even of Clement Ley, of Abercromby, of FitzRoy, of Luke Howard, or of Dalton, of Piddington, or Reid, or Capper, or Loomis, or Ferrel, of Hadley, or Halley, or Hooke, or of the still earlier writers on the weather and the early observers before the invention of the barometer and the thermometer? What had the astrologers, who were prepared to forecast everything to say about the weather? Behind all the fantastic explanations which have been discarded there must have been points of view depending upon experience, which may disclose themselves in the writings which survive. What meteorological knowledge had the discoverers of America? What sort of wind blew the Norsemen to Labrador? If I have any knowledge of the feelings of the Society, it would welcome occasional contributions on the history of the science, recent or remote, not less warmly than an account of personal observations. Mr. Bentley has already told us about weather in war, and Mr. Inwards has given us the meteorology of proverb and folklore. Will not some one tell us of meteorology in literature? *Regular pour mieux sauter* is as apposite to the progress of science as to any other persistent effort, if by it we may understand that an occasional survey of the past helps us to make more sure of the future. Of the 800 of us there must be some who had more leisure and opportunity for retrospective study than the few exponents of meteorology in its modern form, upon whom the Society is accustomed to rely for its subjects of discussion.

THE FELLOW AS A CENTER OF LOCAL INFLUENCE.

And outside the immediate sphere of the Society there is much that is necessary to create an atmosphere favorable for the development of the science. We want people to know that meteorology is not exclusively forecasting. No doubt the view into the unknown future is as Prof. Schuster said in his address to the British Association, the lure of all scientific research, but the long way that has to be traveled in order to make sure of it rewards us with many side views of common human interest. The discovery of the separation of the atmosphere into troposphere and stratosphere surely belongs to the great achievements of the human intellect, and the meteorological exploration of the globe is worth reciting. So I can picture to myself a meteorologist, in some part of the Kingdom or the Empire so remote that he can not share the privileges of our monthly meetings, who would be a center of knowledge of the weather without aspiring to a reputation for foretelling the fortunes of his neighbor's hay or anticipating the prospects of a smooth passage. I admit that it is almost impossible to be the one and avoid the other, largely because meteorology which is not forecasting is a matter of books, maps, pictures, diagrams, and so on. Shortly after the armistice was signed an enterprising film maker wished to make a "movie" of the work of the meteorological office, which he understood had been of great importance in the war. I explained that he might begin with the observer at Spitzbergen or at Madeira and end up with somebody manipulating the receiver of an ordinary telephone; that the intervening

parts were telegraph offices, with wires or without, and a person, not in uniform, drawing a map. Finally we came to the conclusion that meteorology would have to be specially dramatized to make a moving picture.

THE AMATEUR'S LIBRARY AND LABORATORY AS A PERMANENT DEMONSTRATION.

So it is with the meteorologist at home—his laboratory is his library, the instruments are books of tables and a slide rule, a drawing board and squared paper or an outline map. He can not even repeat the experiment of forecasting to-morrow's weather until the map comes in, made by somebody else out of other people's observations. But his maps and diagrams when they are drawn are sometimes of arresting interest. And if ever the time should come, as I hope it may, when I have the leisure to please myself as an amateur meteorologist, I for my part, as my duty to the society and for the pleasure of recalling the work of many colleagues, shall make a meteorological laboratory, and I invite other fellows to do the same. It will be mainly books, long rows of books, whose bindings are unimpressive and whose insides are repulsive masses of figures, but they will be in cases with glass doors in the frames of which will be maps and diagrams, photographs of clouds and other pictures expressive of epochs in the study of weather, that tell of notable achievement in a difficult science, that will be sufficiently interesting, in and for themselves, to stifle the almost irrepressible question, "Will it help in forecasting?" and to convey even to the casual visitor the impression that there are many things about the atmosphere that are worth knowing.

I hope that these remarks may appeal particularly to those who are concerned with the teaching of meteorology in schools and colleges, if any colleges there be in which that study finds a place. There are, I know, or there were before the war, many schools in which the practice of observation is taught, and I would like to impress upon them that, while the knowledge of how things are done in practice is important for the learner, it is the knowledge of what things have been done that provides inspiration for the future. The things that have been done in meteorology are not to be found in personal observations, but in books of very special character, which are easily obtained by those who know where to get them, but do not find their way into ordinary libraries. So the material of teaching for meteorology is a collection of special books that wants a classroom as its home and forms a special library. And the knowledge of what has been achieved is best displayed by photographs, maps, and diagrams on a larger scale than is possible in ordinary books, which should have their home on the library walls even if they hide the binding of the books. With these in sight, experience becomes knowledge, and knowledge leads to the desire for more experience.

ATMOSPHERIC PERIODICITIES.

By P. LEVINE.

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A curve is drawn showing serial values of the lowest reading of the barometer at Paris for each year from 1700 to 1918, from which it appears that there is a periodicity in this quantity of about 96 years—the curve for 1700 to 1821 being very similar to that for 1796 to 1916.—R. C.